

REMARKS

Claims 1-14 were pending at the time of the Office Action. Claims 8 and 10 are cancelled in this response. Claims 5, 6, 11, and 12 are amended in this response. Claims 15 and 16 are new claims. No new matter is added. Claims 1-7, 9, and 11-16 are pending at this time with claims 1, 6, and 11 being independent claims. Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 1-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Banga et al. (US 5,931,904), hereinafter "Banga," and further in view of Smith et al. (US 7,139,844), hereinafter "Smith."

Claim 1 relates to a method of enhancing data delivery. A first packet is sent from a client interface to a remote terminal at a first time. A second packet is received at the client interface from the remote terminal at a second time. A response time of the remote terminal at the client interface is determined based on a time period between the first time and the second time. Using the response time, information related to a connection speed between the remote terminal and the client interface is determined. Multiple different content versions are provided, each having a different amount of information. Each content version is optimized for a specific connection speed. Based on the determined connection speed, a content version is automatically selected from the multiple content versions, and the selected content version is provided to the remote terminal.

Neither Banga nor Smith, taken alone or in any combination, describe or suggest all the features of claim 1. In this regard, Banga describes increasing an apparent speed of connection between a browser at a user station and a proxy or

gateway on a network such as the Internet. See, e.g., Banga at Abstract. To do so, Banga describes providing a local proxy at the user station which interacts with a remote proxy. While the remote proxy is retrieving a newly requested World Wide Web page, it may also be sending to the local proxy a stale cached version of that page. When the new version of the page is finally retrieved, the remote proxy determines the differences between the new version and the stale version, and, assuming the differences do not exceed the new page in size, sends the differences to the local proxy which then reconstructs the new page from the differences and the stale version. See, e.g., Banga at Abstract.

Banga does not describe or suggest "determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time," as claimed. The Office acknowledges this fact. See, e.g., Office Action, page 2, last paragraph. In fact, Banga does not teach performing any operations to determine a response time of the remote terminal.

Specifically, for example, Banga does not teach "sending a first packet from a client interface to a remote terminal at a first time; receiving at the client interface a second packet from the remote terminal at a second time; determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time," as claimed. The Office contends that Banga teaches these features of claim 1. Applicants respectfully disagree.

In support of this contention, the Office cites Banga, col. 3, lines 22-36. The cited portion of Banga states:

In order for the remote proxy to be able to send the difference data to the local proxy, it must calculate the difference data by comparing the current page, once it is received at the remote proxy, to the

version of the page already available at the local proxy. That requires the remote proxy to know which version of the page is already present at the local proxy. This can be accomplished in several ways.

First, the remote proxy must cache at least one version of the page (if the page requested by the user has never been requested by any user connected to the remote proxy, there would be no alternative to waiting for the full current page to be received at the remote proxy and sending the entire page, except that it may be possible to begin sending the entire current page before it is completely received at the remote proxy). (Emphasis added).

See, Banga, col. 3, lines 22-36.

Thus, Banga describes calculating a difference data between a current page received at a remote proxy and a version of the page already available at the local proxy. Contrary to the Office's contention, Banga does not teach determining a response time based on a time period between a first time for sending a first packet from a client packet and a second time for receiving a second packet. Rather, Banga teaches calculating difference data between a cached version and a current version of a World Wide Web page. Therefore, clearly, Banga does not describe or suggest "sending a first packet from a client interface to a remote terminal at a first time; receiving at the client interface a second packet from the remote terminal at a second time," as claimed.

Further, the Office contends that Banga teaches providing multiple different content versions, each having a different amount of information. Also, the Office contends that Banga teaches that each content version is optimized for a specific speed. See, e.g., Office Action, page 3, 2nd paragraph. Applicants respectfully disagree.

In support of this contention, the Office cites Banga, col. 3, lines 3-15. The cited portion of Banga states:

A preferred technique that can be used with the local proxy for enhancing the apparent connection speed relies on the fact that, at present, computational speed and ability at the user station is more readily available, and cheaper, than a faster connection. Thus, the invention relies on the retrieval of a cached version of a requested page and the subsequent transmission from the remote proxy to the local proxy of only the differences between the cached version and the current version. The user station, using its relatively fast and cheap computational resources, reconstructs the current page from the cached version and the received difference data.

See, Banga, col. 3, lines 3-15.

As set forth in Banga, a cached version of a requested page is retrieved and only the differences between the cached version and the current version are subsequently transmitted from a remote proxy to the local proxy. Also, Banga describes that the remote proxy is at the network end of a connection while the local proxy is at the user station end of the connection. See, e.g., Banga, col. 2, lines 53-61.

Thus, Banga describes a cached version of a requested page, a current version of the requested page, and difference data between the cached and current versions. For displaying a page at the user station, either Banga's current version can be transmitted or Banga's cached version and difference data can be transmitted to the local proxy. Banga describes transmitting the cached version to the local proxy while retrieving the current version. See, e.g., Banga at Abstract. So, Banga selects the content to transmit by comparing a time taken to transmit the current version with the time taken to perform the steps of calculating the difference data, transmitting the difference data, and reconstructing the current version at the local proxy using the difference data and the cached version. See, e.g., Banga, col. 4, lines 30-37.

Neither Banga's cached version, nor current version nor difference data is optimized based on the connection speed between the local proxy and the remote proxy. No portion of Banga teaches optimizing the current version or the difference data based on the connection speed between Banga's local proxy and remote proxy. Although Banga describes comparing the sizes of the difference data and the current version, Banga does not describe or suggest any optimization. See, e.g., Banga, col. 4, lines 12-15. Therefore, Banga does not teach the claimed "each content version being optimized for a specific connection speed." Even if one of the criteria that Banga uses to decide whether to transmit the difference data or the current version may be the connection speed between the remote proxy and the local proxy, Banga does not teach that the difference data or the current version are optimized based on the connection speed.

Furthermore, the Office contends that Banga teaches "based on said determined connection speed, automatically selecting a content version from said plurality of content versions," as claimed. See, e.g., Office Action, page 2, 2nd paragraph. Applicants respectfully disagree. In support of this contention, the Office cites Banga, col. 5, lines 32-47. The cited portion of Banga states:

The preferred embodiment of the difference data calculation technique described in the above-incorporated copending patent application outputs as a "side-effect" a compressed version of the original page data. This provides a compressed version of each page which can be stored in the cache in place of the uncompressed version, thereby increasing the number of pages that can be cached for a given cache size. Moreover, that technique produces difference data that at most total no more than a few bytes more than the new version of the data page. Therefore, if that preferred technique is used, then one may not need to abort the transmission of difference data, because there would be no penalty in not doing so. However,

the discussion that follows is generic to any difference calculating technique that might be used, including one that may not be so efficient as the preferred technique.

See, Banga, col. 5, lines 32-47.

As set forth in Banga, calculating difference data between the cached and current versions outputs compressed versions of each page, thereby increasing the number of pages that can be cached at the local proxy.

Banga describes storing the compressed versions in cache in place of the uncompressed versions. Thus, as disclosed in Banga, if a compressed version of a page is available as the cached version, the uncompressed version is not available. Thus, Banga does not select between an uncompressed version and a compressed version of a page because there is no uncompressed version available to select. Also, because Banga replaces the uncompressed version with the compressed version, Banga does not describe selecting a version based on the connection speed between the remote and local proxies. Rather, in Banga, only the uncompressed version is available for transmission. Therefore, contrary to the Office's contention, Banga does not disclose "based on said determined connection speed, automatically selecting a content version from said plurality of content versions," as claimed.

At least for these reasons, Banga does not disclose all the features of claim 1. Smith does not rectify the deficiencies of Banga. Specifically, for example, Smith does not describe or suggest a multiple different content versions, each of which have been optimized based on a specific connection speed.

In this regard, Smith describes a system, for delivering data objects containing data subject to periodic updates to a plurality of clients, configured to connect to at least one

input data stream which carries a specific type of data object, and also establishes a communication session with various clients. See, e.g., Smith at Abstract.

No portion of Smith describes or suggests "providing a plurality of different content versions, each having a different amount of information, each content version being optimized for a specific connection speed, based on said determined connection speed, automatically selecting a content version from said plurality of content versions," as claimed.

Also, the Office states "In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Smith taught in the method and system of Banga-Smith to provide a data delivery mechanism which dynamically adjusts transmission rates to the speed at which a client can receive and process data while ensuring that updated data received by a client is current." (Emphasis added). See, Office Action, page 6, 1st paragraph.

Thus, the Office contends that Smith's teaching of dynamically adjusting transmission rates to the speed at which a client can receive and process data while ensuring that updated data received by a client is current is a reason why one skilled in the art would be motivated to combine Banga and Smith, as suggested by the Office Action. Applicants respectfully disagree.

The data transmitted by Smith is always differential data. In this regard, Smith states "In order to reduce the quantity of data flow ... the formatted data object streams 58 typically contain differential offer data." See, Smith, col. 6, lines 6-9. Thus, Smith describes transmitting only differential data. On the other hand, Banga transmits either difference data or an entire version of a World Wide Web page based on a difference in size between the difference data and the entire version.

Because Smith describes reducing the quantity of data flow by transmitting differential data, incorporating the teachings of Banga into Smith will require that Smith decide whether or not to transmit differential data alone or new versions of the data streams. Such incorporating will change the principle of operation of Smith because Smith is not concerned with transmitting entire versions. Further, because Smith teaches transmitting only difference data, incorporating the teachings of Smith into Banga will cause Banga to not transmit current versions of a page if such current versions are not significantly larger in size than the difference data. Because Banga describes transmitting either the difference data or the current version, incorporating Smith into Banga will render Banga unsatisfactory for its intended purpose of transmitting a current version.

Because the suggested combination will change the principle of operation of one reference and render another reference unsatisfactory for its intended purpose, such a combination is impermissible. See, MPEP 2143.01, V., VI. Consequently, Banga and Smith teach away from each other. Therefore, one skilled in the art will be motivated against making the suggested combination.

Thus, neither Banga nor Smith describe or suggest all the features of claim 1. Further, Banga and Smith teach away from

the combination suggested by the Office. Therefore, a *prima facie* case of obviousness is not established. Accordingly, claim 1 is patentable. Claims 2-5 and 16 depend from claim 1 and are also patentable at least for similar reasons and for the additional recitations that they contain.

As amended, claim 11 relates to operations to cause a system to send a first packet from a client interface to the remote terminal, receive at the client interface a second packet from the remote terminal, determine a response time of the remote terminal at the client interface based on a time period between the first packet being sent and the second packet being received, use said response time to determine a connection speed between the remote terminal and the client interface, receive a request for content from the remote terminal at the client interface, access a plurality of content versions located at a server, each content version having a different amount of content, and each content version being optimized for a specific connection speed, select a content version of the plurality of content versions that the remote terminal can provide, based on the determined connection speed, and communicate the selected version from the server to the remote terminal.

As amended, claim 6 relates to a method of connecting a remote terminal to a server. A response time of a remote terminal at a client interface is determined based on a time period elapsing between a first packet being sent from the client interface to the remote terminal and a second packet being received from the remote terminal at the client interface. Using the response time a connection speed is determined between the remote terminal and the client interface. A request is received from the remote terminal at the client interface for a content version. Multiple content versions are identified at a server coupled to the client interface. Each content version

has a different amount of information at the server and is optimized for a specific connection speed. Based on the connection speed between the remote terminal and the client interface, it is determined that the requested content version is too large in size for the remote terminal to provide. Based on said connection speed, an alternative content version of the multiple content versions is selected. The alternative content version is smaller in size than the requested content version. The selected alternative content version is provided to the remote terminal in response to the request.

Neither Banga nor Smith, taken alone or in any combination, describe or suggest the features of claim 6. Accordingly, claim 6 is patentable. Claims 7, 9, and 15 depend from claim 6 and are also patentable at least for similar reasons and for the additional recitations that they contain.

Claim 11 is patentable at least for reasons similar to claim 6. Claims 12-14 are also patentable at least for similar reasons and for the additional recitations that they contain.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the remarks made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant asks that all claims be allowed. Please apply a one month petition for extension of time fee and any credits or charges to deposit account 06-1050.

Respectfully submitted,

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/ Sushil Shrinivasan L0368 /

Sushil Shrinivasan

Reg. No. L0368

Fish & Richardson P.C.
PTO Customer No.: 20985
12390 El Camino Real
San Diego, California 92130
(858) 678-5070 telephone
(858) 678-5099 facsimile

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